

WHAT IS CLAIMED IS:

1. Built-in ashtray for a motor vehicle, having a housing which has a guide by means of which an ashtray is displaceably in a drawer-type manner disposed in the housing, and having a holder for a cigarette lighter which is mounted on the ashtray so that it can be moved into an operative position projecting upward from the ashtray, the built-in ashtray having a driving device which moves the holder during the displacement of the ashtray out of the housing into the operative position upward and, during the displacement into the housing, in a downward manner, and in that, between the housing and a rearward area of the ashtray, a spring is arranged which changes the ashtray after the release of the locking from a moved-in closed position into a moved-out operative position,

wherein the spring has a progressive characteristic spring curve such that the spring force, which acts upon the ashtray in its moved-out operative position and presses the ashtray toward the outside, is greater than the oppositely directed force component of the operating force acting in the plane of the spring force during the inserting or operating of the cigarette lighter.

2. Built-in ashtray according to Claim 1, wherein the spring force acting upon the ashtray is initially greater out of an operative position than during the subsequent movement of the ashtray into the closed position.

3. Built-in ashtray according to Claim 1, wherein the spring is formed by a band-type flat coil spring made of a thin spring band, an end-side holding section of the band-type flat coil spring being fastened to a lower housing wall, whereas a rolled-together area with windings facing away from the holding section is supported on a rearward-side cage-type receiving device of the ashtray.

4. Built-in ashtray according to Claim 3, wherein the area of the band-type flat coil spring facing the end-side holding section is curved more, that is, has a smaller bending radius, than the area of the band-type flat coil spring which follows.

5. Built-in ashtray according to Claim 3, wherein the area of the band-type flat coil spring facing away from the end-side holding section is provided with at least one punched-out section.

6. Astray assembly for a passenger vehicle, comprising:

an ashtray housing,

an ashtray displaceable in said housing between a closed and open position,

a cigarette lighter holder carried by the ashtray and movable to a downward in operative position when said ashtray is closed and to an upward operative position when said astray is open, and

a spring disposed between the housing and ashtray and operable to assist movement of the ashtray toward the open position,

wherein the spring has a progressive characteristic spring curve such that the spring force, which acts upon the ashtray in its moved-out operative position and presses the ashtray toward the outside, is greater than the oppositely directed force component of the operating force acting in the plane of the spring force during the inserting or operating of the cigarette lighter.

7. Ashtray assembly according to Claim 6, wherein the spring force acting upon the ashtray is initially greater out of an operative position than during the subsequent movement of the ashtray into the closed position.

8. Ashtray assembly according to claim 1, wherein the spring is formed by a band-type flat coil spring made of a thin spring band, an end-side holding section of the band-type flat coil spring being fastened to a lower housing wall, whereas a rolled-together area with windings facing away from the holding section is supported on a rearward-side cage-type receiving device of the ashtray.

9. Ashtray assembly according to Claim 8, wherein the area of the band-type flat coil spring facing the end-side holding section is curved more, that is, has a smaller bending radius, than the area of the band-type flat coil spring which follows.

10. Ashtray assembly according to Claim 10, wherein the area of the band-type flat coil spring facing away from the end-side holding section is provided with at least one punched-out section.

11. A spring for assisting movement of a vehicle ashtray from a closed position to an open position, said ashtray being movable in a housing and carrying a cigarette lighter which is movable with respect to the ashtray between a downward inoperative position and an upward operative position,

wherein the spring has a progressive characteristic spring curve such that the spring force, which acts upon the ashtray in its moved-out operative position and presses the ashtray toward the outside, is greater than the oppositely directed force component of the operating force acting in the plane of the spring force during the inserting or operating of the cigarette lighter.

12. A spring according to Claim 11, wherein the spring force acting upon the ashtray is initially greater out of an operative position than during the subsequent movement of the ashtray into the closed position.

13. A spring according to Claim 11, wherein the spring is formed by a band-type flat coil spring made of a thin spring band, an end-side holding section of the band-type flat coil spring being fastened to a lower housing wall, whereas a rolled-together area with windings facing away from the holding section is supported on a rearward-side cage-type receiving device of the ashtray.

14. A spring according to Claim 13, wherein the area of the band-type flat coil spring facing the end-side holding section is curved more to have a smaller bending radius, than the area of the band-type flat coil spring which follows.

15. A spring according to Claim 13, wherein the area of the band-type flat coil spring facing away from the end-side holding section is provided with at least one punched-out section.

16. A method of making the spring of Claim 14, comprising coiling the spring band with a smaller bending radius at one end connectable with the housing than at portions spaced closer to a connection with the ashtray.

17. A method of making the spring of Claim 13, comprising punching out at least one section of the spring band to change the coil spring forces of said at least one section.